

Project-Induced Displacement & Compensatory Models: A Cross-Jurisdictional Analysis

Lakshana R¹*, Simran Aggarwal²

¹⁻²Scholar, Nalsar University of Law, Hyderabad, Telangana, India

Abstract

The aim of the project is to understand the international best practices in compensation of local people when project-induced displacement and subsequent afforestation takes place. There are international guidelines and recommendations on the approach that countries must adopt towards re-settlement of displaced communities and afforestation. Based on the framework provided by the international instruments, India has created national laws and rules to facilitate the timely rehabilitation of the communities displaced by industrial projects and the loss of green cover caused. There are several shortcomings in the national regime for compensation and afforestation. The initial section deals with the question why compensatory afforestation has failed in India. The problems in the national laws are critically analyzed to highlight the reasons for the same. It is followed by a study on compensation models followed in other countries such as China and Peru. The frameworks recommended by IFC and World Bank are also elaborated to provide a comparative framework to assess the compensation models implemented in India and abroad vis-a-vis the normative frameworks. Towards the conclusion, it is argued that even though funds are available there is no community participation and there is hugely inefficient project management in the compensatory afforestation efforts undertaken in India. This directly affects the amount of compensation and income that people receive from afforestation activities, thereby defeating the aim of the compensatory afforestation regime.

Keywords: compensation, afforestation, CAMPA, displacement, rehabilitation, re-settlement, forests.

***Author for Correspondence** E-mail: Lakshana@outlook.in

INTRODUCTION

The Compensatory afforestation regime in India was propelled by the apex court through a series of decisions given in the *T.N. Godavarman Thirumulpad v. Union of India* case [1]. The Compensatory Afforestation Fund Management and Planning Authority Act 2016 has been passed by the Rajya Sabha and it seeks to create a regime to fund afforestation activities to support displaced people who suffer because of industrial and development activities. The new law conflicts with Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, also known as the Forest Rights Act (FRA). The new Act & Rules mention the activities that would be permitted and restricted in the forest area. Under the new regime, the Centre handed over Rs 42,000 crore that has accumulated in the fund to the state Forest

Departments. It has also committed 90% of all future inflows to the states for afforestation work. The Centre is keen on meeting the goals of intended nationally determined contributors and developing 33% forest cover in India. However, that is a tall order and there are innumerable problems with the new regime.

The following section briefly discusses the problems with the new regime.

SHORTCOMINGS OF THE CA REGIME

Weakening of land acquisition process

There is a clear violation of constitutional rights through exercise of eminent domain by the government. There is no need to demonstrate 'public purpose' as required under other land acquisition laws, while procuring land for the purpose of

compensatory afforestation. Industries are thus free to acquire any piece of land and re-brand. The revenue department is also indirectly empowered to denotify any piece of land and that can later be re-categorised as forestland. The vacuum in the legal provision can easily be exploited and compensatory afforestation can be a façade for illegal land grabbing [2].

The 2016 Act mandates that equivalent afforestation is a pre-requisite for forest clearance. Hence, at the time of acquisition of forestland, an equivalent amount of non-forest land must be acquired and if the same is unavailable, twice the amount of degraded forestland must be purchased. It is possible to trade the forests on international carbon markets and their value is determined by their respective capacities as carbon sinks. However, equivalent afforestation could become nightmarish unless regulated properly. It has been found that nearly 92,000 hectares of forestland was cleared in the first eight months of after the notification of the new regime. Just unchecked acquisition of forestland would result in wide-scale land grabbing under the garb of afforestation.

Reconfiguration of ‘forests’

The major drawback in the legal framework for compensatory afforestation is that plantation of trees is equated to the complex ecosystem of a forest [3]. The UN Climate Negotiations support an understanding of forests as carbon sinks.

A forest is a complex, self-regenerating system, encompassing soil, water, microclimate, energy, and a wide variety of plants and animals in mutual relation. A commercial plantation, on the other hand, is a cultivated area whose species and structure have been simplified dramatically to produce only a few goods, whether lumber, fuel, resin, oil, or fruit [4].

Presently, there is problem faced owing to non-availability of non-forest land for afforestation. Increasingly, land meant for other purposes is diverted to afforestation efforts. This results in lesser availability of land for agriculture, residential, commercial

and other government purposes. Large-scale diversion could result in adverse economic consequences apart from environmental degradation.

Further, the Act has expanded scope of use to include general afforestation programme. Hence, it is not required that the afforestation be targeted and specific. It could also cover broad afforestation projects undertaken irrespective of the relevant deforestation and displacement cause by the industry. The major problem with this relaxation is that the afforestation efforts will not be oriented towards the deforestation caused. Hence, the afforestation won't meet the specific qualities of the forest area that has been cleared for the purpose of the industrial project. This will result in huge problems in the ecological balance if it is left unchecked.

Decimation of rights of forest dwellers

The institutionalized destruction of the rights of local people is a double whammy. The Act provides the basis for kicking out tribal communities from their forestland and also provides the framework for further displacement of vulnerable population by acquisition of non-forest land and degraded forests in the name of compensatory afforestation. Hence, it is a double-edged sword that must be monitored with caution. The aim and purpose of compensatory afforestation will be defeated if one set of vulnerable local people are benefitted by the denial of the rights of other vulnerable people. There should be strict scrutiny of the land that is used for afforestation. Otherwise, there will be a major defeat of the objective of the Act.

The FRA grants rights to traditional forestland dwellers. The FRA provides that gram sabhas (village councils) have both the right and the power to protect, manage and conserve their forests. However, this statutory and traditional right is completely negated by the provisions of CAMPA. The new law ignores the fact that democratic institutions must be involved before major decisions are taken. The vulnerable local population and forest dwellers will bear the brunt of this unless a remedial recourse is provided.

The 2013 Supreme Court decision in Vedanta case affirms forest rights [5]. Vedanta's mining project in the Niyamgiri hills of Odisha was stalled and the court directed Gram Sabha in the area to take a decision on whether the mining should go forward or not. The Gram Sabha vetoed it but Vedanta is now planning to make a fresh bid for mining in the Niyamgiri area.

The CA Rules violate the FRA. Rules cannot technically override the provisions of a statute, but the CA Rules dilute the requirement of consent under FRA to mere consultation. While the requirement of consent would have given Adivasis and other forest dwellers veto power over any plantation proposals, consultation does not. Hence, there is no need to seek Adivasi's consent for plantation when using compensatory afforestation levy.

Further, there is a major discrepancy in the matter of constitution of Gram Sabha. The FRA has no minimum population threshold, but the Rules introduce a floor figure. This is another instance in which the CA Rules clearly lack disregard the provisions of a statute.

“Gram Sabha” means a general body of the village consisting of members that include every adult of the village with population at least exceeding 1,500 people. However, a Gram Sabha may be formed even if the population is less than 1,500. If the population of several villages are less than the prescribed minimum, then the villages are grouped together to form a Gram Sabha. This minimum threshold figure for the formation of a Gram Sabha is extremely problematic. Several villages need to come together to constitute a Gram Sabha as per these requirements. Smaller villages will be unable to form their own Gram Sabha. It will be hard for different forest communities to unite and form join Gram Sabha. Hence, several villages might be left out without a Gram Sabha to represent them.

Van Sanrakshan Samiti or village-level Forest Protection Committees that are constituted under the Joint Forest Management Scheme of the government through which the department

claims to involve local communities in forest management can be consulted instead of Gram Sabha as provided under FRA. Further, FRA prohibits diversion of powers from Gram Sabha. The conversion of Joint Forest Management Committees into Committee of the Forest Right Act under Rule 4(1)(e) is neither mandated nor desirable under the FRA as the objectives, structure and mandate of Joint Forest Management Committee is different. The practice of equating Joint Forest Management Committees with community rights under FRA is highly problematic. This could lead to a situation where the Gram Sabha becomes ineffective and a namesake body. Such a situation will severely affect the constitutional rights of the village communities.

Lack of accountability mechanism

The Act does not provide a compliance check mechanism to regularly monitor and track the progress in afforestation. Further, there are no penalties for misuse of the land acquired under the pretext of afforestation. Media reports mention several instances of industries failing to carry out adequate afforestation in the acquired land and such ‘ghost plantations’ have not been brought to book yet [6]. There has also been media coverage relating to incidents where forest officials burn down certain portions of forestland to hide their lack of progress in enhancing the forest cover.

SUGGESTIONS FOR LEGISLATIVE CHANGE

Around the 1992 World Conference on Environment and Development (Earth Summit) in Rio de Janeiro, the OECD-DAC produced a series of guidelines on aid and the environment. The third guideline in that series, Guidelines for Aid Agencies on Involuntary Displacement and Resettlement in Development Projects intended to assist project developers to ensure that the population displaced by a project received benefits and were properly re-established [7]. This guideline is largely consistent with the standards that apply today, e.g. the World Bank and IFC Performance Standards [8]. The World Bank safeguard policies and International Finance Corporation

Performance Standards specify the detailed requirements that have to be met when displacement is caused by industrial projects and resettlement and rehabilitation endeavours are subsequently undertaken.

Further, the United Nations guiding principles on business and human rights are published for the purpose of implementing the UN 'Respect, Protect and Remedy Framework' and they specify human rights obligations of companies involved in industrial projects [9]. The United Nations Basic Principles and Guidelines on Development Based Evictions and Displacement outlines the human rights principles that specifically apply to resettlement [10]. These international standards are not always followed while making national legislations to create a domestic framework for compensation and rehabilitation of the displaced communities. Governments often invoke the power of eminent domain and implement expropriation procedures instead of building support for a public or private project by negotiating with project-affected people. The CAMPA regime is a clear example of such a scenario. It is suggested that it be modified and amended based on international best practices discussed in this section.

A crucial aspect of international standards that is not reflected in domestic standards is that some people resident in an area needed for a project may not have legal or customary tenure over the houses or land they inhabit or utilise [11]. Nevertheless, international standards highlight that these people still have rights and must be considered in any resettlement process. While they may not necessarily be entitled to full compensation for the value of the dwelling or land, they must not be rendered homeless as a result of the project's land acquisition needs and must be assisted in relocating and in re-establishing their livelihoods.

Before we discuss the resettlement, mechanisms adopted in various countries, it is important to note that resettlement is multi-dimensional and multifaceted. It must happen at multiple scales and levels because of the

varying vulnerabilities, capacities, positionings and interests of the people being resettled [12]. If these aspects are covered, resettlement provides a successful avenue for development. Hence, for resettlement to be a viable opportunity for development, project developers have to change their attitude away from their current efforts to minimise the immediate cost of the resettlement to the project, towards a greater awareness and commitment to shared value.

IFC Performance Standards

(a) Non-financial measures

The non-financial benefits a project can provide include a wide range of advantages ranging from jobs and paid work to the affected people to a diverse set of social welfare facilities [13]. There must be an honest commitment and serious implementation of apposite mechanisms to enhance the local opportunities by erasure of entry barriers. Ventures must be floated to enable the local industries and small enterprises to prosper. For example, the art and craft of the tribal can be taken to wider markets under the aegis of the rehabilitation effort. Another way of utilizing the local enterprises is to procure goods and services from them as much as possible. If the local population is not qualifying, efforts must be made to provide them adequate training and capacity-enhancement. There must be mentorship and other support programs for the local people and businesses. Wherever possible, the project infrastructure must be appropriately modified to see that the local community benefits from its service [14]. A concept called as shared infrastructure must be explored and wherever feasible, the public use of the infrastructure facilities of the industry must be permitted. The manufacture of the equipment used in the project must be outsourced to the local population as much as tenable. The local public works departments must also be involved to identify the impacted people and enrol them for these benefits.

The IFC standards also suggest various good neighbour and good corporate citizen initiatives [15]. These include ventures such as encouraging community volunteer work by

staff, environmental work by the industry staff in the local area, educational and awareness programs and other beneficial activities that the industry employees can undertake to ensure that the local people do not feel harshly affected [16]. Holistic area development must also be undertaken, and the industry must contribute to public infrastructure as much as possible. For instance, laying of downs could be undertaken by the industry if the path is common to the route to the industry. Further, mechanisms against protection of flood, tsunami, storm and other natural disasters must be expanded to the local communities if feasible. Essential services like water and electricity must also be enhanced by the industry at its own expense if possible. The public health facilities and educational institutions can be upgraded or newly established to the extent tenable.

(b) Financial measures

Apart from these diverse non-financial ventures that are meant to ensure that the local population does not feel harmed, there are certain financial initiatives that are suggested. If the project is of such a nature that it will generate income the option of allocation of a percentage of the project revenue to financially support the rehabilitation efforts can be considered. This option ties up the industry and the rehabilitation program directly. Further, the idea of a stream's community development fund or a social investment fund can be brainstormed. This fund can be supported through tranche payments from the project funding. It can link to the profits or certain project milestones based on the stage in which the industry is at. If the funds are gathered over a period of time, the interest accumulated can also be used for beneficial purposes. Another option is to see if a method of equity sharing in any project-created enterprises can be conceived. Further, the government may impose special taxes or levies to be paid to the local or provincial governments, which will be in addition to any normal taxes and charges that are usually paid. These additional levies must be specifically used to support the local development programmes. Based on the nature of industry, other financial ventures can be explored to

ensure that the resettled communities are duly compensated [17].

In the case of electricity generation projects such as dams, the transmission lines or gas pipelines can be laid by the industry itself. Alternatively, the provision of free electricity or gas can be explored. If it is not commercially feasible to provide these services free of cost, it can be seen if substantial discounts can be given to the affected people. If even granting of discounted rates to impacted peoples is not possible, the provision of other forms of access to in-kind benefits can be considered. Some of the IFC standards were implemented during a resettlement initiative at a Kenyan wind farm project [18].

Shandong Ecological Afforestation Project (2010-2016)

The Afforestation Project in Shandong has had a positive influence on the environment and improved agricultural income. The project, The World Bank-supported Shandong Ecological Afforestation Project (2010-2016) which has enabled the plantation of 66,915 hectares of barren slopes and coastal lines. This has prevented soil erosion and improved the environment. The project was a success because it generated income for 26,556 agricultural households. This is also an example of carbon-sequestration [19].

(a) The Issue

The province in the East China region had a low forest cover in 2009 with only 13.4 percent. There were frequent droughts and floods and soil erosion. There was a practice of monoculture by way of widespread growth of industrial timber. This led to loss of biodiversity, productivity and increase in pest insecticides. The biggest challenge here was the mountain slopes were steep and infertile. The coastal areas are saline and have high water levels.

To resolve the issue the World Bank provided the IRBD loan of \$60 million. As Shandong itself had limited experience in handling the afforestation project, the World Bank introduced international and nation techniques

to tackle afforestation, improve the environment and give income opportunities to people staying in the afforestation area [20].

(b) Utilisation of Funds

The aim of the project was to increase the forest cover over a span of the 12th Five-year Plan (2010-2015) across 786,000 hectares in the Shadong province. The aim was to regenerate the degraded mountain sloped and establish a forest ecosystem.

Mixed Plantation

The funds were utilised in such a manner that the growth of crops and plants generated income for locals staying in the afforestation zones. The first component is environmental plantation establishment's project became famous for afforestation models which was centred around the shift from monoculture plantations towards mixed plants. The strategy was to plant non-commercial species on the upper slopes and the commercial tree crops were grown on the lower slopes to generate income for the local farmers [21].

Project Management

The second component was technical support and project management, which is reportedly lacking in India. This ensures (a) transforming nurseries to shrubs (b) bettering the seed quality, equipment and irrigation system (b) applied dissemination programs to educate people about the technology and planting techniques (c) monitoring and evaluation through regular check-ups. This is achieved through provincial officers. Moreover, the project integrated the "demonstrate by doing" strategy by convincing the farmers and the government that ecological afforestation would be beneficial. The farmers were regularly trained. Research was carried out and new technology was adopted [22].

The M&E (Monitoring & Evaluation) Design Protocol

The success of the project was measured by:

- Increase in vegetation cover
- Increase in plant species
- Improvement in environmental conditions

The M&E baseline survey was done in the first year. This M&E was done was done by

the Shadong University. In the second year more focus was on the environmental factors such as water retention, soil organic composition and less focus was on economic indicators like household incomes. Towards the last 6 years the focus was on economic indicators [23].

There must be inter-linkages between researcher's, staff and farmers to improve efficiency of the project. Because of these interlinks, the cost was reduced by 30 per cent. Moreover, the progress must be presented with background on the measurement technique and the types of samples used [24].

(c) Compensation Model - Results

The project was implemented in 28 countries (Shadong Provinces) over 8 years. It was a success because it increased the vegetation cover from 16 to 90 percent. The World Bank survey revealed that this project had reduced soil erosion by 68 percent and improved the water retention capacity by 30 percent. The biodiversity also improved by 40 percent. The plants trees and shrubs increased the vegetation from 7 percent to 66 percent. Planting mixed-species trees and shrubs provided resistance against from wind erosion [25].

The most important issue economic empowerment. The afforestation project has generated income for 26,556 farm households through commercial crops like nuts, tea and fruits. In saline areas, mushroom growing is also common in addition to poultry raising and create additional employment.

There are two villages, which were economically empowered, this The Walnut trees that are planted on 40 hectares of low sloped in the Zhifang Village, with 935 residents. The mixed-planting species model was followed here. This generated a annual revenue by RMB1,925 (about \$280) a year.

The Hanjiagou Village with 131 households now has seven-hectare of tea plantation with 800 person/years of employment. The women, as tea-pickers earn an additional income of RMB3,000 a year (about \$436). The annual revenue from tea plantation is RMB1.42 million (more than \$206,000) [26].

UNDP Forest & Agricultural Study: Peru

The Peruvian government started the Community Participation in Reforestation in 1960s, it went on till 10 years. The aim was to maximize the community participation and afforestation, which would lead to economic empowerment. The four communities that participated were the Ccollana-Chequerec, Ccorao, Equecco-Chacán and Compone [27].

(a) Compone

This was a place of 211 households and the least successful village where afforestation was carried out here. The Community members were given an advance notice of 2 months and were given the freedom to discuss in private. The community faced issues like bribery, disputes among farmers and violation of community agreements. However, democratic meetings resolved the issue. There was a Welcome Plan, which succeeded in Compone. As part of its first contract between the Ministry of Agriculture and the Village Head, the Ministry would pay workers, feed them and provide tools on a loan basis.

In exchange, the Ministry was to receive 30% revenue from all the sales of the plantation (including the leaves and the branches) for 25 years. The benefits in the first few years were unequally distributed, with most amount of benefit given to the middlemen. Later the government made the model community-centric by using the proceeds to give electricity exemptions, which benefitted 70% of the community [28].

(b) Ccorao

This had 132 households and had the most successful afforestation. The community project was a success here. The most important benefits were employment opportunities, increased fuel wood and a new source of income. The distribution benefits were skewed towards women. Moreover, when eucalyptus products were sold based on unfair terms of the contracts, there was a wide-scale revolt. The issue was resolved through joint meetings with the Forest Ministry and the village heads in Villae assemblies. In 1983, the assembly agreed that members would be given preferential status in the sales [29].

(c) Key aspects: work to earn & land entitlement

The projects lead to economic empowerment of those who were dislocated from the afforested area. Instead of paying heavy sums of afforestation compensation, the authorities recruited labour by offering wages. This is the same model that can be followed with tribes, once their consent has been obtained to carry out afforestation on their lands. UNDP noticed that the community perceived the project as useful once it provided them with a source of income [30].

Further, the land entitlement model incentivized the locals and encouraged them to contribute to the afforestation project. Despite traditional beliefs that the local would cooperate, they were divided between splitting their time between income-generating activities and contributing to reforestation activities. This issue was resolved once the government introduced the following model [31].

The government sold the idea of the project by linking it to the incentive to land entitlement. The land entitlement was condition to two major factors:

- The natives could claim entitlement only if they contributed to the reforestation activities for two years.
- They could only carry out reforestation related activities once the land ownership was transferred to them [32].

(d) Inclusive community decision-making

From the case study- it can be gathered, that if reforestation is preferred by the government, then steady income advantages must be given to communities. The communities must also be allowed to play an active role in the decision-making process. Without this, communities prefer the option of harvesting existing plantations.

When the tribal communities were involved, there was a difference in perspectives and disagreements arose, especially with respect to establishing new plantations or renewing the existing ones. Most disagreements arose when the village assembly meeting was poorly

attended. But the idea of reforestation was more accepted when the resources were evenly distributed, and the income generation model was introduced.

The restricted contractual agreements between the villages and Forest Department were negatively influenced as these contracts emphasised compensation to villagers if they established new plantations instead of harvesting existing ones. The villagers saw this as an imposition by the government. There was resentment when they realised that they had to give up their lands for re-forestation [33].

(e) Women – involvement

During phase one of the project, the gender issues were not discernable at the decision-making stage but only arose at the implementation stage. The authorities realized that their voices were shut out in village assemblies. The land that women used for grazing and gathering fuel was used for afforestation. Women allowed the young cattle to wander in the reforested area, which destroyed young plants. In villages where they were more organized in village assemblies, there was less resistance [34].

(f) Income Generation Factors

UNDP studied the project and realized that the participation of communities was variable. Community participation was directly linked to successful afforestation and consequently high compensation packages. In some areas the community participation happened and in some areas the village assemblies though formally included were left out of the decision-making process. There was a strict need of describing the characteristics of each community in depth, which would facilitate greater project participation. The areas where the project encompassed superficial description of the internal characteristics of the community coincided with areas where the afforestation was not a success [35].

(i) Community Characteristics

The social structure of the community was affected by communal reforestation and the distribution of the costs and benefits. In the study, the poorer section was the biggest

opponent to the reforestation efforts. But the wage model coupled with active- decision-making power made the project a success in areas where the government had identified the internal characteristics of the community in depth. Reforestation was easily accepted in communities like the Compone, where middle – income families supported the idea. But the poorer community saw a threat to the use of their land which they depended upon. The same problem was prevalent in Ccollana-Chequerec and Ccorao [36].

Availability of Land

The success in the areas can be attributed to availability of land and cooperation of the locals because their idea of compensation was being met. This even made it easier to convince them to shift from monoculture to mixed planation. There seemed to be a lot of resistance in the first instance. However, in the case of Equecco-Chacán, the renewed support for reforestation following Agrarian Reform was linked to the idea of promising community leaders new parcels of land. In Ccollana-Chequerec, participation was sought because they were made to believe that the income from the reform would be subdivided.

Communal Participation

The project was a success in most areas, also because community participation was seen as a way to ensure a household's entitlement. The forums also acted as a platform for demanding eventual farm plots. This idea appealed the locals more than their previous models of having communal plot. Essentially, they were offered a model that was better than communal ownership. This coupled with the idea of reforestation met the aims of both, the Peru government and the communities [37].

If it was sold to community members, then the sale process would be lower than market values. Even the number of trees that can be sold per person was limited and middlemen were excluded. The success of the project was heavily influenced by the fact that the government incentivized the growth of the 'economic tree', also called the eucalyptus. More than 90 % of the community wanted to plant eucalyptus on their plots. The trees

provided a great source of income. But apart from this there were three factors that influenced the success of the project. The most important factor was the forest technicians began to show flexibility in their site selections. This greatly prevented the locals from believing that the afforestation project would alter their land tenure arrangements and land structure. This was one of the most successful projects and approximately 67 percent of the people were poor [38].

CONCLUSION

There are many factors that have gone a long way in the success of compensation during afforestation projects undertaken in various parts of the world. *One*, the UNDP study has shown that the community decision-making is important to community participation. There is no single solution to compensatory afforestation, but the most effective approach is community participation. The UNDP projects were a huge success because the land utilisation was discussed openly in public assemblies headed by local leaders. This idea appealed to the locals more than the previous models of having communal plots.

Two, work to earn model must be implemented. Instead of paying heavy sums of afforestation compensation, the authorities recruited labour by offering wages and giving them land title incentives. To make reforestation successful, the local population's idea of compensation and not the government's idea of compensation, must be implemented. This model can be followed with tribes, once their consent has been obtained to carry out afforestation on their lands. *Three*, India lacks project management techniques and it must adopt them from the Peru and Shadong Model. There must be interlinkages between researcher's, staff and farmers to improve efficiency of the project. Because of these interlinks, the cost was reduced by 30 per cent in the Shadong Model.

Four, the success of the projects was heavily influenced by the fact that the government incentivised the growth of the 'economic trees. In both the Shadong and Peru model, the strategy was to plant non-commercial species

on the upper slopes and the commercial tree crops were grown on the lower slopes to generate income for the local farmers.

Apart from learning the best practices from successful initiatives in Peru and the Shadong model, India must implement the IFC Handbook on resettlement and the IFC performance standards. These serve as guidebooks to assist countries in ensuring that compensation for project-induced displacement is as effective as possible. The Compensatory Afforestation Act and Rules must be amended to ensure that there are no conflicts with FRA. The shortcomings of CAMPA regime identified in this project must be addressed and the compensation models modified to ensure the inclusive development of India in a sustainable manner.

REFERENCES

1. [I.A. Nos. 1424-1425 of 2005 in Writ Petition (Civil) No. 202 of 1995].
2. Soumitra Ghosh, *Compensatory Afforestation*, 52(38) ECON & POL WKLY (Sept 2017).
3. Manasi Karthik and Arpitha Kodiveri, *The Great Indian Land Grab Being Carried out in the Name of Compensatory Afforestation*, THE WIRE, January 30th, 2018. Retrieved from <https://thewire.in/environment/great-indian-land-grab-carried-name-compensatory-afforestation>
4. RICARDO CARRERE & LARRY LOHMANN, PULPING THE SOUTH (1996).
5. W.P. (Civil) No.180/2011 *Orissa Mining Corpn. Vs. Ministry of Environment and Forests & Ors.*
6. Press Trust of India, *We are being 'befooled' by executive: Supreme Court on diversion of funds*, BUSINESS STANDARD, April 10th 2018, available online at https://www.business-standard.com/article/current-affairs/we-are-being-befooled-by-executive-supreme-court-on-diversion-of-funds-118041000890_1.html
7. OECD-DAC Guidelines for aid agencies on involuntary displacement and resettlement in development projects [Internet]. OECD Development Assistance

- Committee Guidelines on Aid and Environment No. 3. Paris: Organisation for Economic Cooperation and Development (1992). Available from: <http://www.oecd.org/dac/environmentdevelopment/1887708.pdf> (last accessed 20:25 24-3-19).
8. IFC, *Handbook for preparing a resettlement action plan* (2002 Washington DC: IFC) Available from: <http://www.ifc.org/wps/wcm/connect/22ad720048855b25880cda6a6515bb18/ResettlementHandbook.PDF?MOD=AJPERES>
 9. United Nations, the guiding principles on business and human rights: implementing the United Nations 'Respect, Protect and Remedy Framework' (2011 New York and Geneva: United Nations Human Rights Office of the High Commissioner), Available online from: http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf (last accessed 20:23 24-3-19).
 10. United Nations, Basic principles and guidelines on development-based evictions and displacement (2007) Annex 1 of the report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, Available from: http://www.ohchr.org/Documents/Issues/Housing/Guidelines_en.pdf (last accessed 20:21 24-3-19).
 11. Frank Vanclay, *Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development?* 35(1) IMPACT ASSESSMENT AND PROJECT APPRAISAL 3-21 (201), available online at <https://doi.org/10.1080/14615517.2017.1278671> (last accessed 20:20 24-3-19).
 12. OLIVER-SMITH A., *DEFYING DISPLACEMENT: GRASSROOTS RESISTANCE AND THE CRITIQUE OF DEVELOPMENT* (2010 Austin: University of Texas Press).
 13. IFC, *Strategic community investment: a good practice handbook for companies doing business in emerging markets* (2010 Washington DC: International Finance Corporation). Available from: http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/learning+and+adapting/knowledge+products/publications/publications_handbook_communityinvestment_wci_1319576907570
 14. P.S. Gutman, *Involuntary Resettlement in Hydropower Projects*, 19 ANNUAL REVIEW OF ENERGY AND THE ENVIRONMENT 189-210 (November 1994).
 15. A.J. Faas, Eric C. Jones, Graham A. Tobin, Linda M. Whiteford & Arthur D. Murphy, *Critical aspects of social networks in a resettlement setting*, 25(2) DEVELOPMENT IN PRACTICE (2015).
 16. Daley, E., *Gendered Impacts of Commercial Pressures on Land*. Rome: International Land Coalition (2011) http://www.landcoalition.org/sites/default/files/documents/resources/MOKORO_Gender_web_11.03.11.pdf.
 17. Emel J., M. Makene & E. Wangari, *Problems with Reporting and Evaluating Mining Industry Community Development Projects*, 4 Sustainability 257-77 (2012) <http://www.mdpi.com/2071-1050/4/2/257/pdf>.
 18. Scott Wilson, *Lake Turkana Wind Power Project*, Kenya Resettlement Policy Framework (November 2011).
 19. *China: Afforestation Project in Shandong Improves Environment and Farmers' Incomes* (May 2019), The World Bank, available at <https://www.worldbank.org/en/results/2017/07/26/china-afforestation-project-in-shandong-improves-environment-and-farmers-incomes>, last seen on 20.03.2019
 20. Ibid.
 21. *New Look Satellite Data Quantifies*, World Agro Forestry (August 2018), available at <http://www.worldagroforestry.org/news/new-look-satellite-data-quantifies-scale-chinas-afforestation-success>, last seen on 20.03.2019
 22. Supra 18.
 23. Supra 18.
 24. *China's Reforestation Programs: Big Success or Just an Illusion?*, Yale E360 (2016), available at https://e360.yale.edu/features/chinas_reforestation_programs_big_success_or_just_an_illusion, last seen on 06.02.2019.

25. *Afforestation not so cool*, Downtoearth.org.in (June 2018), available at <https://www.downtoearth.org.in/news/afforestation-not-so-cool-33727>, last seen on 05.03.2019.
26. *Mapped: Where 'Afforestation' Is Taking Place Around the World | Carbon Brief*". *Carbon Brief*, 2019,), available at <https://www.carbonbrief.org/mapped-where-afforestation-is-taking-place-around-the-world>, last seen on 07.03.2019.
27. *Peasant participation in Community Reforestation (UNDP)*, Four Communities in the Department of Cuzco, Peru (July 2019), available at <http://www.fao.org/3/u9095e/U9095E00.HTM#TopOfPage>, last seen on 09.03.2019.
28. Ibid.
29. Ibid.
30. *Reforestation: the easiest way to combat climate change | UN DESA | United Nations Department of Economic and Social Affairs (October 2004)*, available at <http://www.un.org/en/development/desa/news/forest/reforestation-the-easiest.html>, last seen on 14.03.2019.
31. *Wastewater Management Can Assist Afforestation*". *UN Environment*, 2019, <https://www.unenvironment.org/news-and-stories/story/wastewater-management-can-assist-afforestation>, last seen on 08.01.2019.
32. *Halting deforestation within reach if we step up action, say UN experts | UN DESA | United Nations Department of Economic and Social Affairs (November 2016)*, available at <https://www.un.org/development/desa/en/news/forest/halting-deforestation-for-sdgs.html>, last seen on 13.01.2019.
33. *Supra 27; Forests.: Sustainable Development Knowledge Platform*, (June 2008), available at <https://sustainabledevelopment.un.org/topics/forests>, last seen on 11.03.2019.
34. *Concept of compensatory afforestation is seriously flawed, The Economic Times (May 2018)*, available at <https://economictimes.indiatimes.com/news/environment/developmental-issues/concept-of-compensatory-afforestation-is-seriously-flawed/articleshow/64855333.cms?from=mdr>, last seen on 19.03.2019.
35. *UN-REDD Programme". UN-REDD Programme*, (January 2019), available at <https://www.un-redd.org>, last seen on 09.03.2019. *Unfccc.int* (June 2017), available at https://unfccc.int/resource/docs/publications/cdm_afforestation_bro_web.pdf, last seen on 01.03.2019.
36. *Supra 27.*
37. *Supra 27.*
38. *5 Successful Reforestation Projects, Insteading*, available at <https://insteading.com/blog/reforestation-projects/> (January 2019), last seen on 20.03.2019.

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